

**TRANSLATION**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>P921-PCT</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/JP2004/018538</b>	International filing date ( <i>day/month/year</i> ) <b>07.12.2004</b>	Priority date ( <i>day/month/year</i> ) <b>08.12.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>B32B15/08</b>		
Applicant <b>NIPPON STEEL CORPORATION</b>		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.	
2.	This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.	
3.	This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).	
4.	This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application	

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- sheets \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	4, 5	YES
	Claims	1-3, 6	NO
Inventive step (IS)	Claims		YES
	Claims	1-6	NO
Industrial applicability (IA)	Claims	1-6	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
<p>Document 1: JP 2001-348678 A (Nisshin Steel Co., Ltd.), 18 December 2001</p> <p>Document 2: JP 8-25552 A (NHK Spring Co., Ltd.), 30 January 1996</p> <p>Document 3: JP 4-32577 A (Kobe Steel, Ltd.), 04 February 1992</p> <p>Claim 1</p> <p>Document 1 discloses a coated steel plate that comprises a resin coating film, a film that has been subjected to a chemical conversion treatment and a plated layer that has fine pits and bumps. Therein, document 1 presents methods similar to the mechanical grinding method and the chemical etching method set forth on page 6 of the description of the present application, which are methods for forming pits in the surface of a layer (paragraph [0013]), and also presents a method similar to the method set forth on page 7 of the description of the present application wherein a liquid-phase acidic solution and a liquid-phase fluorine ion-containing solution are used to grow metal oxides, which is a method for forming cracks in the surface of a layer (paragraph [0018]).</p>			

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

It is true that document 1 does not specifically mention the formation of cracks; however, the metal oxide layer that is provided over the fine pits and bumps can be considered to have sections that correspond to the cracks in the present invention.

Therefore, the invention set forth in claim 1 is not novel.

Meanwhile, the applicant asserts that the invention disclosed in document 1 has bumps, and thus is different from the invention set forth in the claims of the present application. However, both inventions are produced by means of similar production methods, as is indicated above; therefore, the inventions in question can be said to have similar surfaces. Furthermore, pits and bumps can be described as being either pits or bumps depending on the standard of reference for evaluating a surface, and thus the use of the expression 'bumps' cannot be said to constitute a technical difference between the inventions in question.

## Claim 2

Document 1 discloses a coated steel plate that comprises a resin coating film, a film that has been subjected to a chemical conversion treatment and a plated layer that has fine pits and bumps. Therein, document 1 presents methods similar to the mechanical grinding method and the chemical etching method set forth on page 6 of the description in the present application, which are methods for forming pits in the surface of a layer (paragraph [0013]).

It is true that document 1 does not specifically mention the formation of pits; however, the fine pits and

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bumps can be considered to correspond to the pits in the present invention.

Meanwhile, document 3 discloses a feature wherein a porous film comprising metal oxides or metal hydroxides is formed upon the surface of an aluminum member or an aluminum alloy member, and then a resin coating film is coated thereupon. Therein, document 3 also presents methods similar to the mechanical grinding method and the chemical etching method set forth on page 6 of the description in the present application, which are methods for forming pits in the surface of a layer (page 2, lower left column).

It is true that document 3 does not specifically mention the formation of pits; however, the pores can be considered to correspond to the pits in the present invention.

Such being the case, the invention set forth in claim 2 is not novel.

Meanwhile, the applicant asserts that the inventions disclosed in documents 1 and 3 have bumps, and thus are different from the invention set forth in the claims of the present application. However, the inventions in question are all produced by means of similar methods, as is indicated above; therefore, said inventions can be said to have similar surfaces. Furthermore, pits and bumps can be described as being either pits or bumps depending on the standard of reference for evaluating a surface, and thus the use of the expression 'bumps' cannot be said to constitute a technical difference between the inventions in question.

Claim 3

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>The invention disclosed in document 1 can be considered to have both cracks and pits, as is indicated above; therefore, the invention set forth in claim 3 is considered to be the same as the invention disclosed in document 1.</p> <p>Consequently, the invention set forth in claim 3 is not novel.</p> <p>Meanwhile, the applicant asserts that the invention disclosed in document 1 has bumps, and thus is different from the invention set forth in the claims of the present application. However, both inventions are produced by means of similar production methods, as is indicated above; therefore, the inventions in question can be said to have similar surfaces. Furthermore, pits and bumps can be described as being either pits or bumps depending on the standard of reference for evaluating a surface, and thus the use of the expression 'bumps' cannot be said to constitute a technical difference between the inventions in question.</p> <p>Claims 4 to 6</p> <p>Refer to the written opinion that was drafted by the International Searching Authority.</p> <p>Based on the items that are presented in the written opinion, the inventions set forth in claims 4 to 6 lack novelty and do not involve an inventive step.</p>